

REMARKS

The Office Action mailed May 21, 2003 has been carefully considered. Reconsideration of this application, as amended and in view of the following remarks, is respectfully requested.

Amendments to the Specification

In conjunction with the corrections to Figure 29, at page 32, a reference numeral that was used twice for different elements in Figure 29 has been corrected. These amendments do not add new matter.

The Claims

Claims 1 – 17, including independent claims 1, 2, 3, 9 and 17, are pending in this application prior to entry of this Amendment. After entry of this amendment, claims 7, 13, 15 and 18 – 24 are pending in this application, including independent claims 18, 21 and 24.

Claims 1 – 6, 8 – 12, 14, and 16 – 17 have been canceled. Claims 18 – 24 have been added, including new independent claims 18, 21 and 24. Support for the limitations in the newly-added independent claims may be found in the specification, for example, in Figures 2 and 3; at pg. 10, lines 15 – 22; at pg. 9 in the description accompanying Figure 6; at pg. 13, lines 3 – 11 and Figure 10; and at pg. 15, lines 3 – 13 and Figure 13.

Support for the limitations in newly-added dependent claims 19, 20, 22 and 23 may be found, for example, in the application in Figures 2, 3 and 5 and in the description accompanying those figures.

Information Disclosure Statement

In view of the newly added claims in this reply, the Examiner's attention is directed to the prior-filed Information Disclosure Statement mailed on February 6, 2003 and to the reference cited therein to US 6,327,395 issued to Hecht. This US

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patent is incorporated by reference in the subject application and contains related subject matter.

Accompanying this amendment is an Information Disclosure Statement that includes a US Patent Application Publication No. US 2002/0121550 A1, published September 5, 2002, for Application No. 09/454,526. This publication teaches an invention related to the subject matter that is claimed in the subject application. As of this writing, Application No. 09/454,526 is still pending, and the claims therein have been substantially amended since the application was published. The appropriate fee for submitting this reference after the mailing of a first office action has been authorized in the transmittal accompanying this Information Disclosure Statement.

35 USC § 112

In the Office Action, Claims 1 - 2 were rejected, in paragraph 2, under 35 U.S.C. § 112 as being unpatentable for containing subject matter (the claim limitation "displaying the second information and the first information") not described in the specification in such a way as to reasonably convey that the inventors had possession of the claimed invention at the time the application was filed.

Claims 1 and 2 have been canceled. In addition, the alleged new matter "displaying the second information and the first information" has not been introduced into the newly added claims. Therefore, claims 1 and 2 are no longer directed to new subject matter, and it is respectfully requested that the rejection under 35 U.S.C. § 112 be withdrawn.

Review of the Claim Limitations of the Subject Invention

Independent claim 18 is directed to a computer-controlled method for operating on a visible object included in an image disposed on a substrate to produce human-sensible information associated with the visible object. Claim 18 includes the step of receiving image data indicating an image region of the image

disposed on the substrate. The image region includes the visible object and further includes coded embedded data forming a uniform background for the visible object. The coded embedded data indicates a location of the visible object in the image disposed on the substrate.

Independent claims 21 and 24 are respectively directed to an apparatus and a computer program product and include limitations similar to those in claim 18. The discussion below references the features of claim 18 that distinguish over the art of record, but it is understood that the discussion and arguments presented apply equally to claims 21 and 24.

35 USC § 103

In the Office Action, claims 1 – 17 were rejected, in paragraph 4, under 35 U.S.C. § 103 as being unpatentable over Cone (US 4,766,292), hereafter Cone, and further in view of Daniele (US 5,444,779), hereafter Daniele.

Cone teaches reading a UPC label on a merchandise item and generating data identifying the merchandise item. There is no figure in Cone showing the image that includes the label with the UPC code, but it is assumed that the UPC code is a conventional one-dimensional bar code that is found on the labels of merchandise items in, for example, a grocery store.

The conventional UPC bar code does not teach the limitation of claim 18 that requires that the image region (e.g., the portion of the label with the UPC code) include the visible object (e.g., the UPC code) and further includes coded embedded data forming a uniform background for the visible object. In addition, in claim 18, the coded embedded data indicates a location of the visible object in the image disposed on the substrate.

Daniele teaches a system for utilizing a printable, yet unobtrusive glyph or similar two-dimensional encoded mark to identify copyrighted documents. Upon attempting to reproduce such a document, the glyph is detected, decoded and

used to accurately collect and/or record a copyright royalty for the reproduction of the document, or to prevent such reproduction. (Abstract) The disclosure teaches an input image as shown in Figures 4, 5 and 6, and as described at col. 7. In the embodiment depicted in Fig. 4, a two-dimensional code would be located in a predefined position on a document sheet, for example, along the bottom of the page or along the side margin. Col. 7, lines 1 – 5. Daniele discloses that the two-dimensional code information could be placed as a background behind the text of the document. Col. 7, lines 19 – 21. In all cases, the glyph code would be detectable by glyph detector 30 during reproduction of the document. Col. 7, lines 22 – 24. The information content of the decoded glyphs is described at col. 8, lines 22 – 39. Such content may include, for example, an identification number for the document and an indication of a copyright for the document.

Daniele does not appear to disclose, as required by claim 18, that the coded embedded data indicates a location of a visible object in the image disposed on the substrate; the system disclosed by Daniele does not provide for operating on a visible object in the document image to produce human-sensible information associated with the object. Rather, the information encoded by the glyphs in the system described by Daniele is specific to the purpose of handling document copyright protection.

Thus, neither the Cone nor the Daniele reference alone, or in combination, teach a computer-controlled method for operating on a visible object included in an image disposed on a substrate to produce human-sensible information associated with the visible object that includes the step of receiving image data indicating an image region of the image disposed on the substrate, the image region including the visible object and further including coded embedded data forming a uniform background for the visible object, the coded embedded data indicating a location of the visible object in the image disposed on the substrate, as required by claims 18, 21 and 24.

For the foregoing reasons, is believed that independent claims 18, 21 and 24 are patentably distinct over and are not obvious in view of the Cone and Daniele disclosures, and are believed to be in condition for allowance. Insofar as claims 7, 13, 15, 19 – 20 and 22 – 23 are concerned, these claims all include the limitations of and depend from now presumably allowable claims 18, 21 and 24, and therefore are also in condition for allowance.

The Bloomberg Reference

In a prior Office Action, previous versions of now-canceled claims 1 and 2 were rejected under 35 U.S.C. § 102 as being anticipated by Bloomberg (US 5,765,173). It is respectfully asserted that newly added independent claims 18, 21 and 24 are patentable over Bloomberg, either alone, or in combination with a reference that teaches the use of glyphs as the coded embedded data.

Bloomberg teaches the use of an iconic image, either alone or as part of a document image, to encode information that, when decoded, may be used to perform a document image management operation. In particular, the iconic image may be used as part of a graphical user interface as a surrogate for the original text image. (Abstract; Figures 5 and 6 and the description accompanying these figures at cols. 11 and 12.) If the iconic image in Bloomberg is assumed to be the visible object of claim 18, then it can be seen that Bloomberg fails to teach that the image region that includes the visible object further includes coded embedded data forming a uniform background for the visible object.

Bloomberg discusses the use of glyph codes in the background of the disclosure at cols. 2 and 3, and one interpretation of the disclosure might suggest that glyph codes could be used to encode the embedded data in the iconic image, rather than the rectangular block encoding technique. Even if this were the case, a reasonable interpretation of Bloomberg would suggest that the glyphs would encode data within the context of the iconic image, and not as a uniform background to the iconic image. The iconic image is central to the technique disclosed in Bloomberg: “[T]echniques for embedding information unobtrusively in

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an image can be combined with the use of an iconic image representation in order [to] take advantage of the benefits of encoding useful information in an indiscernible manner while retaining the ability to exploit human pattern matching capabilities for certain types of document image management applications where such capabilities provide leveraged functionality." Col.5, lines 64 – 67 to col. 6, lines 1 – 4.

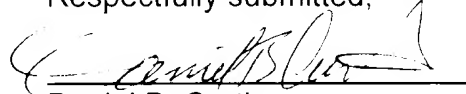
For the foregoing reasons, is believed that independent claims 18, 21 and 24 would not be anticipated by the Bloomberg disclosure, nor rendered obvious by Bloomberg in view of a reference that discloses the use of glyphs to encode data.

Reconsideration Requested

The undersigned respectfully submits that, in view of the foregoing amendments and remarks, the rejections of the claims raised in the Office Action dated May 21, 2003 have been fully addressed and overcome, and the present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that these claims be allowed, and that this case be passed to issue.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Applicant's attorney, Daniel Curtis, at Telephone Number (650) 812-4259, Palo Alto, California.

Respectfully submitted,



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Date: August 21, 2003

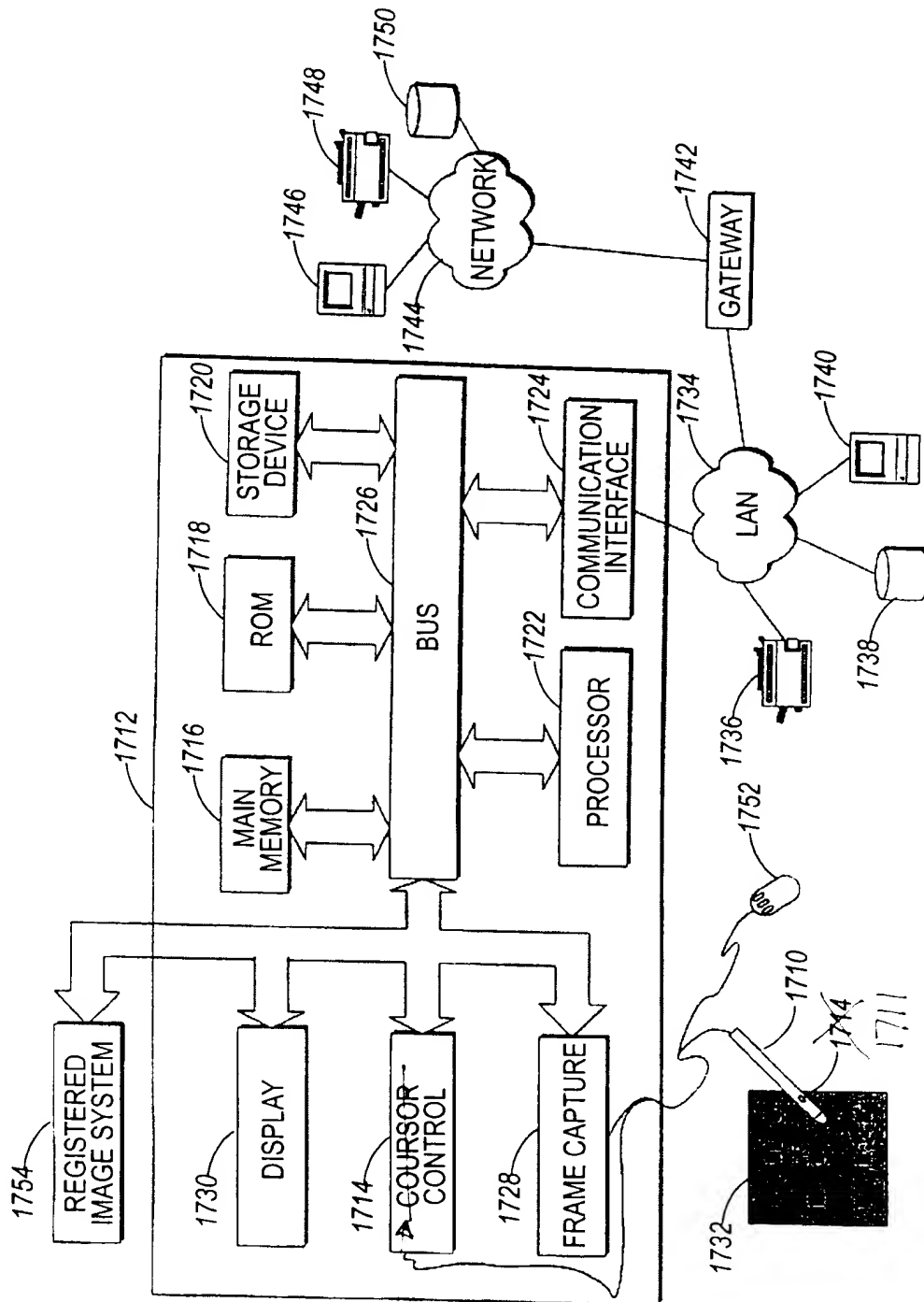


FIG. 29

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